

Response Under 37 CFR 1.116
U.S. Patent Application Serial No. 10/035,444
Reply to OA dated June 30, 2003

IN THE CLAIMS

Please amend claims 1 and 10 as follows:

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1. (Currently Amended): A high power semiconductor device for a radio communication system, comprising:

a compound semiconductor substrate having a resistivity less than 1.0×10^8 Ohm-cm at least at surface thereof;

a buffer layer formed on the compound semiconductor substrate and having a super lattice structure; and

an active layer formed on the buffer layer and having an a high power active element for radio communication formed therein.

2. (Previously presented): The semiconductor device as claimed in claim 1, wherein the compound semiconductor substrate has a resistivity less than 0.6×10^8 Ohm-cm.

3. (Previously presented): The semiconductor device as claimed in claim 1, wherein the active layer is formed at a position within $5.0 \mu\text{m}$ from the surface of the compound semiconductor substrate.

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4. (Previously presented): The semiconductor device as claimed in claim 1, further comprising an electrode layer formed on another surface of the compound semiconductor substrate.

5. (Previously presented): The semiconductor device as claimed in claim 4, wherein the electrode layer is not electrically connected to any power supply potential of the semiconductor device.

6. (Previously presented): The semiconductor device as claimed in claim 4, wherein the electrode layer is connected to one power supply potential of the semiconductor device.

7. (Previously presented): The semiconductor device as claimed in claim 1, further comprising:

a source electrode and a drain electrode formed on the active layer, separated from each other so as to establish a channel region, and

a gate electrode formed above the channel region.

8. (Previously presented): The semiconductor device as claimed in claim 7, wherein the active layer has 2-Dimensional Electron Gasses.

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9. (Previously presented): The semiconductor device as claimed in claim 1, wherein the active layer comprises:

- a collector layer of a first conducting type;
- a base layer of a second conducting type formed on the collector layer;
- an emitter layer of the first conducting type formed on the base layer.

10. (Currently Amended): A high power semiconductor device for a radio communication system, comprising:

a compound semiconductor substrate having a resistivity less than 1.0×10^8 Ohm-cm at least at surface thereof;

a buffer layer formed on the compound semiconductor substrate and having a super lattice structure; and

an active layer formed on the buffer layer and having an active element formed therein ~~The semiconductor device as claimed in claim 1,~~

wherein the compound semiconductor substrate has a resistivity more than 1.0×10^8 Ohm-cm in total.

11. (Previously Canceled).